

1951

CALHOUN AND BATHTOWN REFUGES
NARRATIVE REPORT
JANUARY, FEBRUARY, MARCH, APRIL, 1951

I. GENERAL

A. Weather Conditions:

This was a colder spring than 1950, with maximum temperatures lower in every month except February, which had an 8° higher reading. The minimum temperatures in January and February were much lower than in 1950. Not much change was recorded in March and April temperatures, but the weather was very damp all spring, with very little sunshine.

Relative readings are shown below:

| Month | Year | Maximum | Minimum | Precipitation |
|------------|------|---------|---------|---------------|
| January | 1950 | 75 | 11 | 4.19 |
| | 1951 | 69 | -4 | .97 |
| February | 1950 | 56 | 10 | 3.59 |
| | 1951 | 64 | -9 | 6.44 |
| March | 1950 | 81 | 12 | 2.87 |
| | 1951 | 76 | 17 | 4.32 |
| April | 1950 | 75 | 25 | 2.40 |
| | 1951 | 65 | 33 | 1.63 |
| 1950 Total | | | | 13.05 |
| 1951 Total | | | | 13.36 |

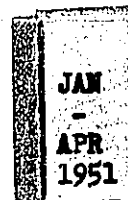
Precipitation was .31 greater than in 1950 and .59 more than in 1949.

B. Water Conditions:

The river stages were higher in every month during this period except January, and all indications are that we will have higher water this spring than for several years.

The fluctuation in pool levels due to dam manipulation was about the same as last year on the Illinois River, but there was a drawdown on the Mississippi River. It was not as bad as last year. Very few ducks used the Bathtown Area on account of the low water.

The comparison of pool levels with the same period in 1950 is shown below:



| Month | 1950 | | | 1951 | | |
|----------|------|------|------------|------|------|------------|
| | High | Low | Difference | High | Low | Difference |
| January | 16.0 | 15.0 | 1.0 | 15.6 | 14.4 | 1.2 |
| February | 16.0 | 14.6 | 1.4 | 17.2 | 14.5 | 2.7 |
| March | 16.0 | 14.8 | 1.2 | 16.5 | 14.6 | 1.9 |
| April* | 16.9 | 15.7 | 1.2 | 18.8 | 16.4 | 2.4 |

*Readings only through April 15.

Maximum monthly variation in 1951 was 2.7', compared to 1.4 in 1950. The water levels during the last part of April and May will be high due to the high water up river.

II. WILDLIFE

A. Migratory Birds:

1. Populations and Behavior:

(a) Waterfowl:

At no time during the month of January were there more than 6,000 ducks in the area. At one time all the ducks left because of very cold weather, which froze all the lakes and the rivers. In 1950, on the other hand, there were an estimated 285,000 ducks wintering in the area.

The peak concentration of mallards this year occurred on March 12, while in 1950 the peak came on March 20. Pintails peaked on March 27 this spring, compared to February 23 in 1950. The scaup peak was late, taking place on April 13, compared to March 18 in 1950.

The total duck flight was up this spring compared to a year ago, with an estimated 381,550 ducks this year compared to 323,125 in 1950.

Ducks did not linger in the area very long this spring, and no huge peaks were reached. Rather, the daily counts showed many birds one day, with much smaller numbers the next, and then more birds would move in. A lot of ducks were observed to move through the area without stopping.

No lead poisoning losses were noted this spring.

(b) Geese:

Canada geese showed an increase over last year, but the peak concentration was lower. The geese would come into the area, stay for a day or two, leave, and then more would come in.

An estimated 12,000 used the area this spring, compared to 10,000 in 1950. Canada geese were present on the area throughout the period.

Snow geese showed an increase this year, too, with the peak concentration reaching 7,500, compared to 3,000 in 1950.

Blue geese also showed an increase this period, with a total of 7,500 using the area compared to 5,000 in 1950. Most of the blue and snow geese left the area in January.

(c) Shorebirds and Other Water Birds:

Wilson snipe have not showed up in numbers yet, although this delay might be the result of cold weather and not a reduction in numbers which might yet use the area. By mid-April only 10 had been observed, compared to 100 for the same period in 1950.

Blue herons had not showed up in numbers by mid-April. Only 50 have been seen, compared to 300 for the same period last year.

2. Food and Cover:

Food and cover was very good in this area, although the ducks left the area during January due to a cold wave. Cornfields had about the same amount of corn left as last year, and many cornfields in the area were not utilized by ducks. Overflow waters in lowlands and cornfields made a considerable amount of food available for ducks this spring. There were not as many ducks observed going to inland fields this spring, indicating that food was plentiful in the bottoms.

D. Fur Animals:

(a) Muskrat:

Musk rats are increasing in the closed areas, but the habitat is limited. Outside the closed areas this year trappers had a hard time as the areas were all frozen up during the trapping season. A goodly number of muskrats were left over, so they should show a good increase in the open areas.

(b) Mink:

Like the muskrat, mink were not taken this winter in any big numbers due to the ice. Lots of signs are showing up this

spring, indicating that there will be some increase in this species.

(c) Skunk:

None of this species was observed during the period. The habitat for skunk in this area is not very good due to lowlands, which are subject to overflow.

(d) Raccoon:

There were a lot of raccoon taken during the season as the price was better this year, but the signs throughout the bottoms indicate this species is holding its own.

(e) Beaver:

Beaver signs are showing up on most islands along the Mississippi and Illinois Rivers. This species is apparently increasing here.

E. Predaceous Birds:

Bald eagles were up some this year. Eighty were seen the area compared with 30 last year. Some are still here.

Red-tailed hawks are showing some increase, with a few more observed this spring than usual.

Turkey vultures are numerous throughout the area, with an estimated 45 using the area.

F. Fish:

Both game fish and rough fish are plentiful in this area. Good catches of crappie and bass were made late this period by pole and line fishermen who braved the cold weather.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development:

There is nothing to report under this as posting will be done during the next period. There was some damage by the ice to the signs along the river channel this period.

A. Recreational Use:

A small number of fishermen have used the area the last part of the season. Boating was getting started in the area by mid-April.

B. Refugee Visitors:

Mr. Conover stopped for a while. Agent Bighin and Agent Stennett worked in the area.

E. Fishing:

Commercial fishing was poor during the first part of the period due to the freeze-up of the river and lakes, but during the last part of the period it was very good. The demand is greater than last year, and the price is holding up.

F. Violations:

Illinois

One commercial fisherman was apprehended for possession of game fish and was fined \$100.00 and costs of \$4.00.

One commercial fisherman picked up for possession of game fish was fined \$100.00 and costs of \$4.00.

Both cases were taken to State Court.

Superintendent of Refugee

May 2, 1951.

Approved: MAY 10 1951

Acting Regional Director

WATERFOWL

Refuge CalhounMonths ofJanuary

to

April1951

| (1) Species Common Name | (2) First Seen | | (3) Peak Concentration | | (4) Last Seen | | (5) Young Produced | | (6) Total |
|---|--|---|--|--|---|--|-----------------------|-----------------|---|
| | Number | Date | Number | Date | Number | Date | Broods Seen | Estimated Total | Estimated for period |
| I. <u>Swans:</u> Whistling swan | | | | | | | | | |
| II. <u>Geese:</u> Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose | 300 | 1/2 | 1,000 | 3/27 | 200 | 3/12 | | | 12,000 |
| | 2,000 | 3/6 | 7,500 | 3/24 | 250 | 4/3 | | | 7,500 |
| | 3,000 | 3/6 | 7,500 | 3/24 | 250 | 4/3 | | | 7,500 |
| III. <u>Ducks:</u> Mallard Black duck Cadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck | 500 200 50 200 2,000 25 500 100 200 50 50 400 300 200 | 1/2 1/24 3/27 3/27 2/12 1/24 4/3 3/20 2/26 2/21 1/2 2/16 1/2 1/2 | 130,000 5,000 300 5,000 160,000 25 6,000 5,000 600 100 4,000 1,000 30,000 500 | 3/12 3/12 3/12 4/3 3/27 1/24 4/10 3/29 3/21 4/6 4/13 3/22 4/13 2/12 | 500 25 25 2,000 100 625 400 2,000 100 100 4,000 200 30,000 100 | 4/12 4/4 4/13 4/13 4/13 3/24 4/13 4/11 4/10 4/6 4/13 4/16 4/13 3/21 | | | 130,000 5,000 300 3,000 160,000 1,000 8,000 5,000 600 100 4,000 2,000 30,000 500 |
| IV. <u>Coot:</u> | 100 | 3/6 | 5,000 | 4/5 | 300 | 4/13 | | | 5,000 |

3-1750

(over)

Form NR-1

(Sept. 1950) Interior - Duplicating Section, Washington, D.C. 82449

SUMMARIES

Dates waterfowl counts made _____ Total waterfowl usage during period 322,580
Percent of waterfowl area covered _____ Peak waterfowl numbers 302,575
Dates brood counts made _____ Areas used by concentrations Stump, Swan, Gilbert and
Percent of area covered in brood counts _____ Fowler Lakes, Cedar Swamp, Illinois River, Dresser Island
Total production: _____ Principal nesting areas this season _____
 Geese _____
 Ducks _____
 Coots _____

Reported by Edward A. Davis

INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak concentration: The greatest number of the species present in a limited interval of time.
- (4) Last seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the f.

WATERFOWL

Refuge Batebtown Months January to April, 19 51

| (1) Species | | (2) First Seen | | (3) Peak Concentration | | (4) Last Seen | | (5) Young Produced | | (6) Total |
|---------------------|--|-------------------|------|---------------------------|------|------------------|------|-----------------------|-----------------|----------------------|
| Common Name | | Number | Date | Number | Date | Number | Date | Broods Seen | Estimated Total | Estimated for period |
| I. <u>Swans:</u> | | | | | | | | | | |
| Whistling swan | | | | | | | | | | |
| II. <u>Geese:</u> | | | | | | | | | | |
| Canada goose | | | | | | | | | | |
| Cackling goose | | | | | | | | | | |
| Brant | | | | | | | | | | |
| White-fronted goose | | | | | | | | | | |
| Snow goose | | | | | | | | | | |
| Blue goose | | | | | | | | | | |
| III. <u>Ducks:</u> | | | | | | | | | | |
| Mallard | | | | | | | | | | |
| Black duck | | | | | | | | | | |
| Gadwall | | | | | | | | | | |
| Baldpate | | | | | | | | | | |
| Pintail | | | | | | | | | | |
| Green-winged teal | | | | | | | | | | |
| Blue-winged teal | | | | | | | | | | |
| Cinnamon teal | | | | | | | | | | |
| Shoveller | | | | | | | | | | |
| Wood duck | | 100 | 2/26 | 300 | 3/21 | 80 | 4/5 | | | 300 |
| Redhead | | | | | | | | | | |
| Ring-necked duck | | | | | | | | | | |
| Canvas-back | | | | | | | | | | |
| Scaup | | 50 | 1/2 | 5,000 | 4/13 | 5,000 | 4/13 | | | 5,000 |
| Golden-eye | | | | | | | | | | |
| Buffle-head | | | | | | | | | | |
| Ruddy duck | | | | | | | | | | |
| IV. <u>Coot:</u> | | | | | | | | | | |

The water was very low in this area during the main flight and ducks went up the Illinois River to Pearl, Illinois, and then crossed over to Sny Bottoms.

3-1750

(over)

Form NR-1

(Sept. 1950) Interior - Duplicating Section, Washington, D.C. 82449

SUMMARIES

Dates waterfowl counts made _____ Total waterfowl usage during period 5,300
Percent of waterfowl area covered _____ Peak waterfowl numbers 3,300
Dates brood counts made _____ Areas used by concentrations Hatchtown closed area.
Percent of area covered in brood counts _____
Total production: _____
Principal nesting areas this season _____
Geese _____
Ducks _____
Coots _____
Reported by Edward A. Davis

INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
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- (3) Peak concentration: The greatest number of the species present in a limited interval of time.
- (4) Last seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these are necessarily based on an analysis of the rest of the form.

3-1751)
Form NR-1A
(Nov. 1945)

MIGRATORY BIRDS
(Other than waterfowl)

Refuge Calhoun and Eatontown

Months of January to April 1952

| (1) Species | (2) First Seen | | (3) Peak Numbers | | (4) Last Seen | | (5) Production | | | (6) Total |
|----------------------------------|-----------------------|------|---------------------|------|------------------|------|--------------------|------------------|----------------|---------------------|
| Common Name | Number | Date | Number | Date | Number | Date | Number Colonies | Total # Nests | Total Young | Estimated Number |
| I. <u>Water and Marsh Birds:</u> | | | | | | | | | | |
| Blue heron | 2 | 2/27 | 80 | 4/3 | 4 | 4/13 | | | | 100 |
| Egrets | None observed as yet. | | | | | | | | | |
| Grebe | 20 | 3/3 | 300 | 4/3 | 25 | 4/13 | | | | 400 |
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(over)

| (1) | (2) | (3) | (4) | (5) | (6) |
|--|-----|-----|-----|------------------|-----------------|
| III. <u>Doves and Pigeons</u> : | | | | | |
| Mourning dove | | | | | |
| White-winged dove | | | | | |
| IV. <u>Predaceous Birds</u> : | | | | | |
| Golden eagle | | | | | |
| Duck hawk | | | | | |
| Horned owl | | | | | |
| Magpie | | | | | |
| Raven | | | | | |
| Crow | | | | | |
| Large numbers of crows here during the period. | | | | | |
| | | | | Reported by..... | Edward A. Davis |

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

| (1) Species | (2) Density | | (3) Young Produced | | (4) Sex Ratio | (5) Removals | | | (6) Total | (7) Remarks |
|-------------------------------|--|----------------------|----------------------------|--------------------|---------------------|-----------------|---------------------|-----------------|--|--|
| Common Name | Cover types, total acreage of habitat | Acres per Bird | Number broods obs'd. | Estimated Total | Percentage | Hunting | For Re- stocking | For Research | Estimated number using Refuge | Pertinent information not specifically requested. List introductions here. |
| Nothing to report under this. | | | | | | | | | | |

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

3-1754
Form No. 1
(June 1945)

SMALL MAMMALS

Refuge Calhoun and Datchtown

Year ending April 30, 1961

| (1) Species | (2) Density | | (3) Removals | | | | | (4) Disposition of Furs | | | | | (5) Total Popula- tion | |
|---|---|------------------------|-----------------|----------------|-----------------------|---------------------|-------------------|----------------------------|-------------------|-----------------|------------------------------|--------------|---------------------------------|--|
| Common Name | Cover Types & Total Acreage of Habitat | Acres Per Animal | Hunting | Fur Harvest | Predator Control * | For Re- stocking | For Re- search | Share Trapping | | | Total Refuge Furs Shipped | Furs Donated | Furs Destroyed | |
| | | | | | | | | Permit Number | Trappers Share | Refuge share | | | | |
| Nothing to report under this. | | | | | | | | | | | | | | |
| * List removals by Predator Animal Hunter | | | | | | | | | | | | | | |

* List removals by Predator Animal Hunter

REMARKS:

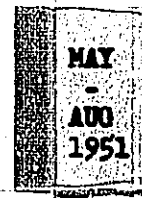
Reported by _____

INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

- (1) SPECIES: Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)
 - (2) DENSITY: Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
 - (3) REMOVALS: Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.
 - (4) DISPOSITION OF FUR: On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.
 - (5) TOTAL POPULATION: Estimated total population of each species reported on as of April 30.
- REMARKS: Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.

1951



CALHOUN AND BATCHTOWN REFUGES
NARRATIVE REPORT
MAY, JUNE, JULY, AUGUST, 1951

I. GENERAL

A. Weather Conditions:

This period was slightly warmer than the same period last year, and the minimum temperature each month was higher than last year. The maximum temperature was greater in July and August. There were very few hot nights this period, but the humidity was high. Relative readings are shown below:

| Month | Year | Maximum | Minimum | Precipitation |
|------------|------|---------|---------|---------------|
| May | 1950 | 92 | 41 | 3.03 |
| | 1951 | 90 | 43 | 2.46 |
| June | 1950 | 97 | 50 | 2.00 |
| | 1951 | 93 | 51 | 7.84 |
| July | 1950 | 93 | 50 | 0.47 |
| | 1951 | 96 | 57 | 4.83 |
| August | 1950 | 88 | 53 | 0.31 |
| | 1951 | 92 | 57 | 0.64 |
| 1950 Total | | | | 5.81 |
| 1951 Total | | | | 15.77 |
| Difference | | | | 9.96 |

B. Water Conditions:

The river stages were higher this year compared with 1950. There were two high periods this year that were higher than the last two years. Last year there was high water in May and June, but it occurred this year in May and July. The July high water did a lot of damage to the posting in all areas, cleaned out all crops in the lowland, and left very little duck feed in the bottoms.

The high water reading for the summer of 1950 was 19.0, compared to 27.5' this season.

The fluctuating pool levels, due to dam manipulations, were not bad during May, June, and July as dams were open, but after the high water had passed the river dropped to 1.2' below normal.

The comparison of pool levels with the same period in 1950 is shown below:

| Month | 1950 | | | 1951 | | |
|--------|------|------|------------|------|------|------------|
| | High | Low | Difference | High | Low | Difference |
| May | 18.6 | 15.8 | 3.0 | 22.9 | 15.5 | 7.4 |
| June | 19.0 | 15.3 | 3.7 | 18.2 | 14.8 | 3.7 |
| July | 15.8 | 14.9 | 0.9 | 27.5 | 17.3 | 10.2 |
| August | 15.6 | 15.0 | 0.6 | 15.5 | 14.1 | 1.4 |

Maximum monthly variation in 1950, 8.2' compared with 22.7' this year, was very destructive, and the July flood damaged and retarded duck food production severely.

II. WILDLIFE

A. Migratory Birds:

1. Populations and Behavior:

(a) Waterfowl:

During the first part of May a limited number of teal, scaup, mallards, and coot still remained in the area. By the last part of May all ducks had gone north except wood duck and a few mallards, which nested in the area.

The wood duck broods showed a decrease this year. Thirty-six broods were observed this year, compared with 47 broods last year.

Two broods of mallards were observed this year, compared with one brood last year.

One brood of mergansers with 10 young was observed in Six Mile Slough (Swan Lake Area).

A comparison of 1950 and 1951 is shown in the following table:

| Species | Broods | | Young | |
|-----------|--------|------|-------|------|
| | 1950 | 1951 | 1950 | 1951 |
| Wood duck | 47 | 36 | 491 | 289 |
| Mallard | 1 | 2 | 6 | 16 |
| Merganser | 0 | 1 | 0 | 10 |
| Totals | 48 | 39 | 497 | 315 |

During the first part of August blue-wing teal were showing up in the area, and some flocks of mallards. Wood ducks are common in the area.

(b) Geese:

Ten Canada geese were observed on the Mississippi River on July 30 near Swan Lake. They stayed about three days, then left for parts unknown.

(c) Swans:

No swans were observed during the period.

(d) Egrets:

A small number of egrets were present the first part of May. An estimated 2,000 were present during the first part of August as compared to 600 in 1950 and 1,600 in 1949.

(e) Shorebirds:

Shorebirds show an increase in this area. Killdeer and semipalmated plover are in the majority. Wilson snipe were observed, but no decided increase was noted in this species. A few yellow-legs were observed and also a few curlews.

(f) Other Water Birds:

Blue heron showed a little increase over last period. A total of 158 were observed compared with 150 last year. No nests were observed this period.

2. Food and Cover:

Food and cover was cleaned out by the high water which occurred during July. Food and cover conditions in Pools 25 and 28 are considered the worst since the refuge was put in.

Smartweed is starting to grow in the Batchtown area, but it is doubtful if it will amount to much.

B. Upland Game Birds:

None observed on refuge land as all areas are mostly water areas, with very little habitat for upland birds.

C. Big Game Animals:

Two deer were observed on the west side of Swan Lake. The deer that were on Portage have left the area.

D. Fur Animals:(a) Muskrat:

Muskrat have experienced a hard time during this period due to the high water through most of the period. This will cut down the young this year. The habitat in this area is limited for muskrat.

(b) Mink:

The high water has driven the mink up small creeks or to the hills. Few signs have been observed since the water went down, but this species will be back in the bottoms before fall.

(c) Skunk:

Skunk would not be on the refuge unless he was a good swimmer.

(d) Beaver:

Beaver signs are numerous along the Mississippi and Illinois Rivers. It is believed that this species is on the increase.

(e) Otter:

None observed here.

(f) Raccoon:

Several young raccoon were observed drowned during the high water. This will cut this species down some, but there are plenty of signs through the bottoms.

(g) Foxes:

Fox are present in large numbers. One farmer reported killing three during one week in August while they were trying to get his poultry. The county has taken the bounty off of foxes as it was costing too much money.

E. Predaceous Birds:

Red-tailed hawks are numerous through the area. It is believed this species is holding his own.

Turkey vultures are about the same as last year. Thirty-nine were observed, compared with 40 last year.

F. Fish:

During the early part of the season fishing was just fair and late getting started. The fishing was limited to small areas as the water was muddy in most of the areas. In clear water out of the flooded areas, big catches of game fish such as blue gill, bass, and crappie were made. Lots of fishermen reported getting the limit of bass all during the high water. This period lasted about two weeks, and a large number of blue gill were taken during this period. The boat business was down through this time as most of the fishing was done at the edge of flood waters. Since the river has gone down and the weather remained hot, fishing has been just fair, but boat liveries are doing better.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development:

Posting has been a good sized job this period as most of the area had been gone over and reconditioned in June, and in July there was very high water in all of the closed areas that did lots of damage to signs. Most of the closed areas have been gone over again and reconditioned. About five more days will put them in good shape. The Gilead Club proposed closed area has not been started yet. It is set up for the first of September, when it becomes a law.

The 21-foot boat was painted early this spring and put in the water.

B. Plantings:4. Cultivated Crops:

Eight permits for sharecropping were issued during the period as follows:

| Permittee | Address | Acres | Use |
|------------------|--------------------|-------|-------------|
| Robert La Marsh | Deer Plain, Ill. | 6 | Corn |
| Joe Navarro | Deer Plain, Ill. | 6 | Corn |
| Henry Weigel | Golden Eagle, Ill. | 20 | Corn |
| John Held | Brussels, Ill. | 8 | Beans |
| Harry Binslager | Golden Eagle, Ill. | 80 | Corn, beans |
| John Sherman | Grafton, Ill. | 30 | Corn |
| August Toppmeyer | Deer Plain, Ill. | 10 | Beans |
| W. F. Duncan | Grafton, Ill. | 6 | Corn |

All farmers had a good prospect, but the high water cleaned all fields out, no crops this year.

VI. PUBLIC RELATIONS

A. Recreational Use:

A good number of people used the area during the period for camping, fishing, boating. Swimming has been held up some during the period on account of the high water, but since the river has gotten down to normal swimming is increasing in the area. Pleasure boating is about the same as last year, and there is very heavy use of the river for this purpose.

B. Refuge Visitors:

Superintendent Steele visited the area during the month of May.

C. Refuge Participation:


Attended refuge conference at Winona, Minnesota July 17, 18, and 19.

E. Fishing:1. Sport:

This has been a very good year for sport fishing. The high water was in favor of this sport, and good catches of bass, blue gill, and crappie were reported, some bass running as high as 7 pounds.

2. Commercial:

Commercial fishing has been spotty on account of the high water. It keeps the fishermen busy moving their nets, but they report that the high water has brought new fish into the area and good results are now obtained. The price and demand are good.


Superintendent of Refuges

August 31, 1951

Acting Regional Director

WATERFOWL

Refuge Calhoun and Batohtown Months May to August 19 51

| (1) Species | (2) First Seen | | (3) Peak Concentration | | (4) Last Seen | | (5) Young Produced | | (6) Total |
|--|-------------------|------|---------------------------|------|------------------|------|-----------------------|-----------------|----------------------|
| | Number | Date | Number | Date | Number | Date | Broods Seen | Estimated Total | Estimated for period |
| I. <u>Swans:</u> Whistling swan | | | | | | | | | |
| II. <u>Geese:</u> Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose | | | | | | | | | |
| III. <u>Ducks:</u> Mallard Black duck Gadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck Merganser | present | | 20 | 8/15 | still here | | 2 | 16 | 20 |
| | present | | 358 | 8/15 | still here | | 36 | 286 | 358 |
| | present | | 12 | 5/28 | still here | | 1 | 10 | 12 |
| IV. <u>Coot:</u> | | | | | | | | | |

SUMMARIES

Dates waterfowl counts made _____ Total waterfowl usage during period 390
Percent of waterfowl area covered _____ Peak waterfowl numbers 390
Dates brood counts made _____ Areas used by concentrations Calhoun and Patchtown
Percent of area covered in brood counts _____ Refuges
Total production: _____ Principal nesting areas this season _____
Geese _____
Ducks 312
Coots _____

Reported by E. A. Davis

INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak concentration: The greatest number of the species present in a limited interval of time.
- (4) Last seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

3-1751
Form NR-
(Nov. 1945)

MIGRATORY BIRDS
(Other than waterfowl)

Refuge Calhoun and Patahtown Months of May to August 1951

| (1) Species | (2) First Seen | | (3) Peak Numbers | | (4) Last Seen | | (5) Production | | | (6) Total |
|---|-------------------|------|---------------------|------|------------------|------|--------------------|------------------|----------------|---------------------|
| Common Name | Number | Date | Number | Date | Number | Date | Number Colonies | Total # Nests | Total Young | Estimated Number |
| I. <u>Water and Marsh Birds:</u> | | | | | | | | | | |
| American Egret | 2 | 5/2 | 2000 | 8/12 | still here | | | | | 2000 |
| Great Blue Heron | 5 | 5/2 | 158 | 8/12 | still here | | | | | 158 |
| II. <u>Shorebirds, Gulls and Terns:</u> | | | | | | | | | | |
| Herring Gull | 2000 | 5/2 | 2000 | 5/2 | still here | | | | | 2000 |
| Common Tern | 1000 | 5/2 | 1000 | 5/2 | still here | | | | | 1000 |

(over)

| (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|-----|-----|-----|-----|
| <p>III. <u>Doves and Pigeons</u>:</p> <p>Mourning dove</p> <p>White-winged dove</p> | | | | | |
| <p>IV. <u>Predaceous Birds</u>:</p> <p>Golden eagle</p> <p>Duck hawk</p> <p>Horned owl</p> <p>Magpie</p> <p>Raven</p> <p>Crow</p> | <p>Large number of crows present during this period</p> | | | | |
| <p>Reported by <u>E. A. Davis</u></p> | | | | | |

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

3-1752
Form MR-2
(April 1946)

WILDLAND GAME BIRDS

1613

Refuge Calhoun and Hatchtown Months of May to August, 1951

| (1) Species | (2) Density | | (3) Young Produced | | (4) Sex Ratio | (5) Removals | | | (6) Total | (7) Remarks |
|-----------------------------|--|----------------------|----------------------------|--------------------|---------------------|-----------------|---------------------|-----------------|--|--|
| Common Name | Cover types, total acreage of habitat | Acres per Bird | Number broods obs'd. | Estimated Total | Percentage | Hunting | For Re- stocking | For Research | Estimated number using Refuge | Pertinent information not specifically requested. List introductions here. |
| NONE PRESENT ON EITHER AREA | | | | | | | | | | |

INSTRUCTIONS

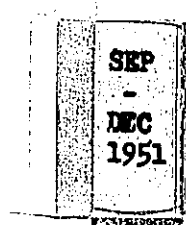
Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

1951

CALHOUN AND BATCHTOWN REFUGES
NARRATIVE REPORT
SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER, 1951



I. GENERAL

A. Weather Conditions:

The maximum temperature in September and December was higher during this period than last year. Minimum temperatures were lower in 1950 in every month except October, which was the same. Weather conditions were better for the duck hunter this year than last year for there were not many cold days to keep hunters out of the fields. All but two days were good weather for duck hunters during the 45 day season. Many days were very warm, and most of the hunters were pleased with weather conditions this season.

Relative readings are shown below:

| Month | Year | Maximum | Minimum | Precipitation |
|------------|------|---------|---------|---------------|
| September | 1950 | 91 | 36 | 1.77 |
| | 1951 | 97 | 39 | 3.67 |
| October | 1950 | 90 | 35 | .98 |
| | 1951 | 85 | 35 | 2.07 |
| November | 1950 | 88 | 6 | 2.69 |
| | 1951 | 75 | 13 | 2.27 |
| December | 1950 | 68 | 2 | .80 |
| | 1951 | 73 | 27 | .20 |
| 1950 total | | | | 8.24 |
| 1951 total | | | | 9.21 |

B. Water Conditions:

The river stage in Pool 26 was good throughout the period, with essentially normal levels prevailing part of the time, and slightly above normal readings the rest of the time. This resulted in more favorable hunting conditions in the pool, especially in areas which are difficult of access during low or normal water. Generally, conditions in Pool 26 were the most favorable in several years.

A comparison of pool levels in Pool 26, compared to the same period in 1950, is shown in the following table:

| Month | High | Low | Difference | Year |
|-----------|------|------|------------|------|
| September | 15-4 | 14-0 | 1.4 | 1950 |
| | 15-8 | 15-0 | .8 | 1951 |
| October | 15-4 | 14-6 | .8 | 1950 |
| | 15-8 | 15-0 | .8 | 1951 |
| November | 15-1 | 14-5 | .6 | 1950 |
| | 16-1 | 15-1 | 1.0 | 1951 |
| December | 15-1 | 14-3 | .8 | 1950 |
| | 15-8 | 15-0 | .8 | 1951 |

Maximum monthly variation in 1951 was 1.0 compared with 1.4 in 1950.

In Pool 25, however, extremely unfavorable water conditions were found. This pool was essentially normal throughout the early fall, but the night before the waterfowl season opened, this pool was drawn down about 5.3 ft., and since the best waterfowl territory in the pool is located immediately above the dam, by the morning of opening day, extensive mud flats resulted. Water was found only in the beds of the old, deeper sloughs, and most of the area was dry. Some of the best blinds in the area were left several hundred yards from the nearest water, and duck hunting was impossible. In fact, during the first week of the season, no hunters had been out in the portions managed by the State of Illinois as a public hunting area, while in the other open area, 59 hunters took only 18 ducks on the opening day.

These unfavorable water conditions resulted in a great many irate hunters, complaining about the seeming unfairness of draining this particular pool, while Pool 24 above, and Pool 26 below were held at or above normal.

Because of low water prevailing throughout the hunting season, only 45 hunters used the State managed area during the entire season, and these hunters succeeded in bagging only 15 ducks. Also, the 490 hunters using the other open shooting area in the pool managed to bring to bag only 911 ducks, for an average of only 1.85 ducks per hunter. In 1950, a total of 1,947 hunters were checked in this pool, so it can be seen how much hunting was done this year.

Pool 25 was brought back to normal the day the waterfowl season closed, and has remained essentially normal since that time.

II. WILDLIFE

A. Migratory Birds:

1. Populations and Behavior:

a. Waterfowl:

Ducks started coming into the area in late September, and increased during the rest of the period. Blue-winged teal arrived late this year, coming in on September 29, compared to August 23 in 1950. Pintails were first observed on September 29, also, while in 1950 they were first seen on September 20. Mallards came in on September 29, compared to September 11 last year.

The peak concentration occurred on November 22. At that time, a big flight of ducks went through, with few stopping on the refuge. These birds were moving through ahead of a snow storm.

The peak concentration on the Calhoun Refuge this fall was 321,000 ducks, compared to 150,000 in 1950. Ducks would pile up in the refuge in goodly numbers; then they would be greatly reduced; and then they would build up again. It is believed that with warmer weather following early season cold, many ducks moved back from the south again.

The peak concentration on the Batchtown area occurred before the season opened. On October 23, a peak of 49,400 ducks were observed, compared to 79,400 last year. At no time during the waterfowl season did the population exceed 19,000 birds. This was most unusual, for normally high populations are built up and held in the closed area throughout the season. Unfavorable water conditions in this pool, as discussed previously, were responsible for the reduction of birds using the Batchtown area this fall.

In both the Batchtown and Calhoun areas, ducks fed in cornfields and were in good condition throughout the season. Since most of the feeding was done after shooting hours, some hunters disliked this feeding habit this fall.

b. Geese:

Canada geese started to stay on the refuge on October 27. They remained there all season, and they were present in about their peak numbers by mid-December. The peak concentration occurred on December 7, with 500 geese being noted compared to the peak of 200 in 1950. It is estimated that 15 Canada geese were killed in the vicinity of the refuge this year.

Blue and snow geese showed a good increase this year. They started coming into the area on October 20, and peaked at 12,000 on December 7. Quite a number of these birds were still present on the Calhoun Refuge at the close of this report period. The 1950 peak of blues and snows was 4,000 birds. It is estimated that 75 of these birds were killed in the vicinity of the Calhoun Refuge during the past waterfowl season.

c. Swans:

None were observed on either area this period.

d. Egrets:

Egrets were numerous all during the season. By the time the duck season opened, most of them had pulled out. The peak concentration occurred October 8, with an estimated 2,000 birds in the area compared to 800 birds last year.

e. Shorebirds:

Wilson snipe showed an increase this year, with an estimated 150 in the area, compared to 50 for the same period in 1950.

There was also an increase noted in killdeer, with 600 present this year compared to 400 a year ago.

2. Food and Cover:

Excessive and prolonged high water during the early part of the growing season resulted in a reduced production of natural foods this year, and consequently the food conditions in the closed areas were not up to the usual abundance. This shortage of food in the closed areas did not have an adverse effect on waterfowl usage, however. Higher than normal water levels during the season in Pool 26 made considerable food available, when marginal smartweeds, millets, etc., were flooded with a few inches of water.

In Pool 25, food conditions during the season were very poor, because the almost complete lack of water on normal areas rendered the good crop of smartweed and millet seed unavailable to ducks.

In both pools, however, the presence of machine-picked cornfields alleviated any shortage of natural foods, and waterfowl fed in these fields in large numbers throughout the fall.

B. Upland Game Birds:

No upland game birds are present on either the Batchtown or Calhoun Refuges.

There is ample food and cover present on both areas to sustain fairly high populations of these birds in event any should become established in the areas. Perhaps high water in the spring discourages upland game from using the bottomlands.

C. Big Game Animals:

No big game animals are present on either area.

D. Fur Bearers:

a. Muskrats:

The muskrat population is low in this portion of the river. Very few signs were observed during the season, and there was very little trapping done this year. It is probable that prolonged high water had a deleterious effect on this species.

b. Minks:

Trappers report that minks are scarcer this year than last. Very few of these animals were taken by trappers this year.

c. Skunk:

No skunk sign has been noted on either area this fall.

d. Beaver:

Beavers seem to be on the increase this year. Almost all islands have beaver signs on them, and a new house was built on Six-mile Slough near Swan Lake this fall.

For the first time in many years, Illinois had a beaver season this fall. An estimated 15 animals were removed from the vicinity of the Calhoun Refuge.

e. Otter:

No otter signs have been seen on either area.

f. Raccoon:

Trappers and coon dog handlers report raccoon are plentiful throughout the bottoms this fall, and some of them report taking 6 or 7 in one hunt. This species continues to increase in this area.

g. Foxes:

Foxes are plentiful in areas, and in the entire portion of the river in this vicinity. Trappers are taking a lot of foxes and report that these animals are increasing.

h. Predaceous Birds:

Eagles remain static, although this fall 27 were seen, compared to 25 for the same period in 1950.

Hawks are common in all areas. Red-tailed hawks seem to be in the majority, and appear to be on the increase.

A goodly number of owls have been observed in the timbered areas. These birds seem to be on the increase in this locality.

i. Fish:

Fish are plentiful in all lakes in the area. The Illinois and Mississippi Rivers seem to have plenty of rough fish as some commercial fishermen report good results. Pole and line fishermen report that there are plenty of game fish in all lakes and sloughs.

III. REFUGE DEVELOPMENT AND MAINTENANCE

B. Plantings:

4. Cultivated Crops:

Although 8 share-cropping permits were issued, no crops were planted because the area was so badly flooded out during the prolonged high water this spring.

VI. PUBLIC RELATIONS

A. Recreational Uses:

Boating and picnicking were extensively done throughout the fall on both the Illinois and Mississippi Rivers. Pecan

picking, always a popular activity after the first frost, was noticed and it was as extensive as in the past.

B. Refuge Visitors:

Dr. W. E. Green, biologist for the Upper Mississippi Refuge, spent the first week of the waterfowl season here helping to check hunters and secure bag check data.

C. Refuge Participation:

There is nothing to report under this heading.

D. Hunting:

Duck hunters in Pool 26 had a good season. The better duck hunters took plenty of ducks, although high shooting was still very common, and high shooters often were unsuccessful. All areas checked showed a greater hunter success this year than in the past, with the exception of the Batehtown area, where hunting was poor as a result of low water throughout the season. Excellent hunting weather prevailed throughout the 45 day season this fall. Hunting pressure on the Illinois River, Pool 26, was greater this year than normally, because low water at Batehtown forced many who usually hunt there to do their hunting in Pool 26.

In the Batehtown area this fall, a total of 535 hunters were checked, with 926 ducks, for an average daily bag of 1.73 per hunter. This compares to the data collected from 1947 hunters taking 2884 ducks for a 1.48 average in 1950. No hunters went out in the State managed area for the first week of the season, because of extremely low water. During the entire season, only 45 hunters were taken out, and they succeeded in bagging only 15 ducks.

In Pool 26, a total of 2,579 hunters were checked, with 2,981 ducks, for a daily average of 1.15 ducks per hunter day. In 1950, a total of 1,561 hunters were checked with 1,436 ducks, for an average of 0.91 birds per day.

The Diamond Island Club in Pool 26 showed the biggest increase this fall, with a total of 482 hunters taking 1,031 ducks, for an average of 2.13 ducks per day. In 1950, it was found that there were a total of 184 hunters with 257 ducks, for an average of 1.30 ducks per day.

It is interesting to note that while hunting conditions in Pool 25 were generally considered very poor, the success rate

was higher this year than last, for in 1950 the average for the entire pool was 1.48 birds per day; while this fall, the pool averaged 1.73 ducks per day. It should be pointed out, however, that hunting pressure was only 27.47 percent as great as in 1950.

E. Fishing:


Pole and line fishing was fair during the early part of the period, but was over by the first of November. Crappie, bass, and bluegill fishing was better than last year.

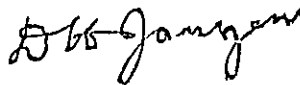
Commercial fishing was better this fall than last year too. Fishermen report that the high water put new fish in the area and they expect better results. Most of them say this was a better year than last year.

F. Violations:

No cases were made during this period. Hunters in this area were the best behaved that have been noticed for several years. The sanctuaries were respected more this year than at any time since they were established.

January 5, 1952.


Superintendent of Refuges



Regional Director
January 11, 1952

WATERFOWL

Refuge CalhounMonths Septemberto December19 51

| (1) Species | (2) First Seen | | (3) Peak Concentration | | (4) Last Seen | | (5) Young Produced | | (6) Total |
|---|--|--|--|--|--|--|-----------------------|---|----------------------|
| Common Name | Number | Date | Number | Date | Number | Date | Broods Seen | Estimated Total | Estimated for period |
| I. <u>Swans:</u> Whistling swan | | | | | | | | | 500 |
| II. <u>Geese:</u> Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose | 200 | 10/27 | 500 | 12/7 | 500 | 12/9 | | | 6,000 6,000 |
| III. <u>Ducks:</u> Mallard Black duck Gadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck | 100 100 500 200 50 300 150 400 200 100 100 100 100 100 50 100 | 9/29 10/20 10/27 10/6 9/29 10/27 9/20 10/27 9/29 10/27 10/27 11/13 11/13 11/13 11/13 11/13 10/27 | 245,500 2,000 500 5,000 40,000 500 300 2,000 3,000 200 300 10,000 3,000 50 100 100 300 | 11/22 11/22 10/27 11/13 11/22 11/3 11/3 11/13 11/3 11/13 11/13 11/13 11/13 11/13 11/22 11/22 11/13 | 88,300 500 200 200 10,000 200 100 200 50 200 100 3,000 50 100 100 200 | 12/7 12/9 11/8 12/9 12/9 11/22 11/13 12/8 12/9 11/13 11/24 11/22 12/9 11/22 11/22 11/22 | | 300,000 4,000 6,000 11,500 120,000 4,000 5,000 3,000 5,000 200 300 10,000 100 100 300 | |
| IV. <u>Coot:</u> | 500 | 10/6 | 20,000 | 10/27 | 50 | 12/8 | | | 20,000 |

(over)

Form NR-1

3-1750

(Sept. 1950) Interior - Duplicating Section, Washington, D.C. 82449

SUMMARIES

| | |
|---|---|
| Dates waterfowl counts made _____ | Total waterfowl usage during period <u>500,000</u> |
| Percent of waterfowl area covered _____ | Peak waterfowl numbers <u>321,300 ducks</u> <u>20,000 geese</u> |
| Dates brood counts made _____ | Areas used by concentrations <u>Swan & Gilbert Lakes</u> |
| Percent of area covered in brood counts _____ | Principal nesting areas this season _____ |
| Total production: | |
| Geese _____ | |
| Ducks _____ | |
| Coots _____ | |
| | Reported by <u>Edward A. Davis</u> |

INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak concentration: The greatest number of the species present in a limited interval of time.
- (4) Last seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these are necessarily based on an analysis of the rest of the form.

WATERFOWL

 Refuge Patoka Months September to December 19 51

| (1) Species | (2) First Seen | | (3) Peak Concentration | | (4) Last Seen | | (5) Young Produced | | (6) Total |
|---|-------------------|-------|---------------------------|-------|------------------|-------|-----------------------|-----------------|----------------------|
| | Number | Date | Number | Date | Number | Date | Broods Seen | Estimated Total | Estimated for period |
| I. <u>Swans:</u> Whistling swan | | | | | | | | | |
| II. <u>Geese:</u> Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose | | | | | | | | | |
| III. <u>Ducks:</u> | | | | | | | | | |
| Mallard | 25 | 9/29 | 10,000 | 10/23 | 3,000 | 12/7 | | | 20,000 |
| Black duck | 100 | 10/20 | 300 | 10/23 | 100 | 12/7 | | | 600 |
| Gadwall | 100 | 10/23 | 100 | 11/8 | 100 | 11/8 | | | 400 |
| Baldpate | 100 | 10/6 | 3,000 | 10/23 | 200 | 11/8 | | | 3,000 |
| Pintail | 50 | 9/29 | 20,000 | 10/23 | 200 | 12/7 | | | 35,000 |
| Green-winged teal | 100 | 10/23 | 100 | 10/23 | 50 | 11/24 | | | 200 |
| Blue-winged teal | 150 | 9/29 | 1,000 | 10/23 | 100 | 11/8 | | | 1,000 |
| Cinnamon teal | | | | | | | | | 200 |
| Shoveller | 200 | 10/23 | 200 | 11/8 | 200 | 11/8 | | | 300 |
| Wood duck | 200 | 9/29 | 300 | 11/23 | 100 | 11/8 | | | 100 |
| Redhead | 25 | 10/23 | 100 | 11/8 | 50 | 11/8 | | | |
| Ring-necked duck | | | | | | | | | 100 |
| Canvas-back | 100 | 11/8 | 100 | 11/29 | 100 | 11/29 | | | 5,000 |
| Scaup | 5,000 | 11/8 | 5,000 | 11/8 | 200 | 11/24 | | | 50 |
| Golden-eye | 50 | 11/8 | 50 | 11/8 | 50 | 11/8 | | | 50 |
| Buffle-head | 50 | 11/8 | 50 | 11/8 | 50 | 11/8 | | | 100 |
| Huddy duck | 25 | 11/8 | 100 | 11/8 | 100 | 11/8 | | | |
| IV. <u>Coot:</u> | 300 | 10/8 | 6,000 | 10/20 | 500 | 11/8 | | | 6,000 |

3-1750

(over)
(Sept. 1950) Interior - Duplicating Section, Washington, D.C. 82449

Form NR-1

SUMMARIES

Dates waterfowl counts made _____ Total waterfowl usage during period 7E,000
Percent of waterfowl area covered _____ Peak waterfowl numbers 49,400
Dates brood counts made _____ Areas used by concentrations Batchtown closed areas
Percent of area covered in brood counts _____
Total production: _____
Principal nesting areas this season _____
Geese _____
Ducks _____
Coots _____
Reported by Edward A. Davis

INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak concentration: The greatest number of the species present in a limited interval of time.
- (4) Last seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

3-1751
Form NR-
(Nov. 1945)

MIGRATORY BIRDS
(Other than waterfowl)

Refuge Calhoun

Months of September to December 1951

| (1) Species | (2) First Seen | | (3) Peak Numbers | | (4) Last Seen | | (5) Production | | | (6) Total |
|---|-------------------|------|---------------------|-------|------------------|------|--------------------|------------------|----------------|---------------------|
| Common Name | Number | Date | Number | Date | Number | Date | Number Colonies | Total # Nests | Total Young | Estimated Number |
| I. <u>Water and Marsh Birds:</u> | | | | | | | | | | |
| Blue heron | 30 | 9/4 | 200 | 10/9 | 2 | 12/7 | | | | 300 |
| Egrets | 75 | 9/4 | 2,000 | 10/8 | 3 | 12/1 | | | | 5,000 |
| Cormorants | 20 | 9/4 | 5,000 | 10/28 | 10 | 12/7 | | | | 6,000 |
| | | | | | | | | | | |
| II. <u>Shorebirds, Gulls and Terns:</u> | | | | | | | | | | |
| Gulls | 100 | 9/4 | 2,000 | 12/7 | 2,000 | 12/7 | | | | 5,000 |
| Killdeer | 100 | 9/4 | 500 | 9/28 | 25 | 12/7 | | | | 600 |
| Wilson snipe | 20 | 9/4 | 150 | 10/23 | 2 | 12/7 | | | | 150 |

(over)

| (1) | (2) | (3) | (4) | (5) | (6) |
|--|---|-----|-----|-----------------|-----|
| III. Doves and Pigeons: Mourning dove White-winged dove | | | | | |
| IV. Predaceous Birds: Golden eagle Duck hawk Horned owl Magpie Raven Crow | Crows are here in big numbers all year. | | | | |
| | | | | Edward A. Davis | |
| | | | | Reported by | |

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

3-1751
Form NR-1A
(Nov. 1945)

MIGRATORY BIRDS
(Other than waterfowl)

Refuge Batoctown Months of September to December 1951

| (1) Species | (2) First Seen | | (3) Peak Numbers | | (4) Last Seen | | (5) Production | | | (6) Total |
|---|-------------------|------|---------------------|-------|------------------|-------|--------------------|------------------|----------------|---------------------|
| Common Name | Number | Date | Number | Date | Number | Date | Number Colonies | Total # Nests | Total Young | Estimated Number |
| I. <u>Water and Marsh Birds:</u> | | | | | | | | | | |
| Blue heron | 10 | 9/17 | 100 | 10/5 | 3 | 12/7 | | | | 180 |
| Egrets | 20 | 9/17 | 1,000 | 10/5 | 2 | 11/18 | | | | 1,800 |
| Cormorants | 100 | 9/7 | 3,000 | 10/28 | 5 | 12/7 | | | | 5,000 |
| | | | | | | | | | | |
| II. <u>Shorebirds, Gulls and Terns:</u> | | | | | | | | | | |
| Gulls | 300 | 9/17 | 3,000 | 12/7 | 3,000 | 12/7 | | | | 6,000 |
| Killdeer | 50 | 9/17 | 200 | 9/27 | 8 | 12/7 | | | | 300 |
| Wilson snipe | 5 | 9/17 | 50 | 10/23 | 2 | 11/18 | | | | 100 |

(over)

UPLAND GAME BIRDS

1613

Refuge Calhoun and Batcheson Months of September to December, 1941

[illegible]

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

Form No. 3

BIG GAME

Refuge Calhoun and BatchesmanYear 1941

| (1) Species | (2) Density | (3) Young Produced | (4) Removals | | | | (5) Losses | | | (6) Introductions | | (7) Estimated Total Refuge Population as of Dec. 31 | (8) Sex Ratio |
|----------------|--|--------------------------|-----------------|---------------------|------|-----------------|---------------|---------|------------------|----------------------|--------|--|------------------|
| Common Name | Cover types, total Acreage of Habitat | Number | Hunting | For Re- stocking | Sold | For Research | Predation | Disease | Winter Losses | Number | Source | | Percentage |
| | Nothing to report under this. | | | | | | | | | | | | |

INSTRUCTIONS

Form NR-3 - BIG GAME

- (1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.) exclusive of fenced herds. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated total number of young produced on refuge.
- (4) REMOVALS: Indicate total number in each category removed during the year.
- (5) LOSSES: On the basis of known records or reliable estimates indicate total losses in each category during the year.
- (6) INTRODUCTIONS: Indicate the number and refuge or agency from which stock was secured.
- (7) TOTAL REFUGE POPULATION: Give the estimated population of each species on the refuge as of December 31.
- (8) SEX RATION: Indicate the percentage of males and females of each species as determined from field observations or through removals.

Refuge Calhoun and BatchtownYear 1951

Botulism

Lead Poisoning or other Disease

Period of outbreak _____

Period of heaviest losses _____

Losses:

| | Actual Count | Estimated |
|----------------|--------------|-----------|
| (a) Waterfowl | _____ | _____ |
| (b) Shorebirds | _____ | _____ |
| (c) Other | _____ | _____ |

| Number Hospitalized | No. Recovered | % Recovered |
|---------------------|---------------|-------------|
| (a) Waterfowl | _____ | _____ |
| (b) Shorebirds | _____ | _____ |
| (c) Other | _____ | _____ |

Areas affected (location and approximate acreage) _____

Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc.) _____

Condition of vegetation and invertebrate life _____

Remarks _____

Kind of disease _____

Species affected _____

| Number Affected Species | Actual Count | Estimated |
|----------------------------|--------------|-----------|
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

Number Recovered _____

Number lost _____

Source of infection _____

Water conditions _____

Food conditions _____

Remarks Nothing to report under this.

Form No.

FISH

1617

Refuge Calhoun and Batehtown

Year 1961

| Species | Relative Abundance | Sport Fishing | | Commercial Fishing | | Restocking | | Number removed for Restocking |
|---------|-------------------------------|------------------|--------------|--------------------|--------------|----------------|--------------|-------------------------------|
| | | Man days Fishing | Number Taken | No. of Permits | Pounds Taken | Number Stocked | Area Stocked | |
| | Nothing to report under this. | | | | | | | |

REMARKS:

Form R-7

PLANTINGS
(Marsh - Aquatic - Upland)

Refuge Calhoun and Patchtown

Year 1951

| Species | Location of Area Planted | Rate of Seeding or Planting | Amount Planted (Acres or Yards of Shoreline) | Amount & Nature of Propagules | Date of Planting | Survival | Cause of Loss | Remarks |
|-------------------------------|--------------------------|-----------------------------|--|-------------------------------|------------------|----------|---------------|---------|
| Nothing to report under this. | | | | | | | | |

TOTAL ACREAGE PLANTED:

Marsh and aquatic _____
 Hedgerows, cover patches _____
 Food strips, food patches _____
 Forest plantings _____

[illegible]

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS

Cultivated Crops Report Form NR-8 should be prepared on a calendar-year basis for all crops harvested or utilized during the calendar year and submitted with the December 31 refuge report.

Permittee - List each permittee separately. If lands of the refuge are farmed by refuge personnel or hired labor, this should be indicated in the Permittee column.

Permit No. - List the number of the Special Use Permit issued to the individual.

Use or Location - The Unit No. or name specified in the Economic Use Plan should be listed in this column.

Crops Grown - A separate line of the form should be used for each crop grown by each permittee or by refuge personnel. This is important, since if each crop grown by each operator is not specifically enumerated, the report will be of no value for statistical purposes.

Average Yield per Acre - It is important that the average yield per acre of each crop grown by each operator should be shown.

Permittee's Share - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. It is requested that all crops harvested be reduced to bushels wherever possible, or, as in the case with the harvesting of seed such as that of sweet clover, alfalfa, bromegrass, etc., the total harvested crop in pounds may be shown. Timothy, alfalfa, or other hay harvested by the permittee should be shown on Form NR-10 and should not be shown in the Permittee's Share column.

Government's Share or Return - Harvested - Show the number of bushels harvested for the Government and the acreage from which this share is harvested, both for grain raised by refuge personnel and by permittees. Unharvested - show the exact number of acres of crops allowed to remain unharvested as food and cover for wildlife. An estimate of the number of bushels of grain that is available for the wildlife in such unharvested crops should be shown in the Bushels column.

Compensatory Services, or Cash Revenue - Show other services received by the Government in cooperative farming activities, the number of acres of food strips planted for wildlife, the amount of wildlife crops not otherwise reported that are planted by cooperators for the Service, or the cultivation of wildlife plantations. If the permit is on a fee basis, the total cash revenue received by the Service.

COLLECTING AND RECEIPTS OF PLANTING STOCK
(Seeds, rootstocks, trees, shrubs)

Refuge Calhoun and Batohtown Year 1961

| Species | Collections | | | | Receipts | | Total Amounts on Hand | Amount Surplus |
|-------------------------------|-------------|------------------------------|--------|-----------|----------|--------|-----------------------|----------------|
| | Amount | Date or Period or Collection | Method | Unit Cost | Amount | Source | | |
| Nothing to report under this. | | | | | | | | |

3-1760
Form NR-10
(April 6)

HAYING AND GRAZING

Refuge Calhoun and Batchtown

Year 1951

| Permittee | Permit No. | Unit or Location | Actual Acreage Utilized | Animal Use Months | Tons of Hay Harvested | Period of Use From - To | Rate | Total Income | Remarks |
|-------------------------------|------------|------------------|-------------------------|-------------------|-----------------------|-------------------------|------|--------------|---------|
| Nothing to report under this. | | | | | | | | | |

Totals:

Acreage grazed..... Animal use months..... Total income Grazing.....
Acreage out for hay..... Tons of hay out..... Total income Haying.....

3-1761
Form NR-1

TIMBER MOVAL

Refuge Calhoun and Patchtown Year 1951

| Permittee | Permit No. | Unit or Location | Acreage | No. of Units Expressed in B. F., ties, etc. | Rate of Charge | Total Income | Reservations and/or Diameter Limits | Species Cut |
|-------------------------------|------------|------------------|---------|---|----------------|--------------|-------------------------------------|-------------|
| Nothing to report under this. | | | | | | | | |

Total acreage cut over..... Total income.....

No. of units removed B. F..... Method of slash disposal.....
Cords.....
Ties.....
.....